## AMENDMENTS TO THE CLAIMS

1. (Previously Presented) An isolated and purified nucleic acid sequence comprising a polynucleotide sequence encoding a polypeptide of an antibody, or fragment thereof, wherein said antibody, or fragment thereof, has binding affinity to a p53 protein or a portion thereof in vertebrates, and wherein said nucleic acid sequence is obtained from a vertebrate host expressing an immune response against a naturally-occurring disease.

2. (Previously Presented) The nucleic acid sequence according to claim 1, wherein said immune response is characterized by expression of at least one p53 antibody.

3. (Previously Presented) The nucleic acid sequence according to claim 1 comprising a polynucleotide sequence encoding an $F_{ab}$ antibody fragment, or fragment thereof, having binding affinity to a p53 protein or a portion thereof in vertebrates.

4. (Previously Presented) An isolated and purified nucleic acid sequence encoding a polypeptide of an antibody, or fragment thereof, comprising a polynucleotide sequence selected from the group consisting of SEQ ID Nos 1-30, wherein said antibody, or fragment thereof, has binding affinity to a p53 protein or a portion thereof.

5. (Previously Presented) The nucleic acid sequence according to claim -1, wherein the nucleic acid sequence is DNA.

6. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the nucleic acid sequence is RNA.

7. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the nucleic acid sequence comprises a polynucleotide sequence or sequences, or an analogue thereof, encoding an antibody fragment or other immunologically active fragment thereof, -wherein the antibody, or fragment thereof, has binding affinity to a p53 protein or a portion thereof in vertebrates.

8. (Previously Presented) The nucleic acid sequence according to claim 7, wherein the antibody fragment or other immunologically active fragment comprises at least one complementarity determining region.

9. (Previously Presented) The nucleic acid sequence according to claim 7, wherein the antibody fragment comprises at least one functional antigen-binding domain.

10. (Previously Presented) The nucleic acid sequence according to claim 7, wherein the antibody fragment is selected from the group consisting of: Fv, $F_{ab}$, $F(ab)_2$, scFv (single chain Fv), dAb (single domain antibody), bi-specific antibodies, diabodies and triabodies.

11. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the antibody, or fragment thereof, has binding affinity for residues of one or more of the N-terminus, the C-terminus or the centrai domain of a p53 protein or a portion thereof.

12. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the antibody, or fragment thereof, has binding affinity for residues of the N-terminus of a p53 protein or a portion thereof.

13. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the antibody, or fragment thereof, has binding affinity for residues about 10 to about 55 of the N-terminus of a p53 protein or portion thereof.

14. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the antibody, or fragment thereof, has binding affinity for residues about 10 to about 25 of the N-terminus of a p53 protein or portion thereof.

15. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the antibody, or fragment thereof, has binding affinity for residues about 40 to about 50 of the N-terminus of a p53 protein or portion thereof.

16. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the antibody, or fragment thereof, has binding affinity for residues about 27 to about 44 of the N-terminus of a p53 protein or portion thereof.

17. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the antibody, or fragment thereof, has binding affinity for residues about 40 to about 44 of the N-terminus of a p53 protein or portion thereof.

18. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the antibody, or fragment thereof, has binding affinity for residues of the central domain of a p53 protein or a portion thereof.

19. (Previously Presented) The nucleic acid sequence according to claim 1, wherein said sequence comprises a polynucleotide sequence encoding a polypeptide of an antibody, or fragment thereof, having binding affinity to a p53 protein or a portion thereof in vertebrates, wherein said polynucleotide sequence encodes an immunoglobulin light chain variable region polypeptide or an immunoglobulin heavy chain variable region polypeptide.

20. (Previously Presented) The nucleic acid sequence according to claim 1, wherein said sequence comprises a polynucleotide sequence encoding a polypeptide of an antibody, or fragment thereof, having binding affinity to a p53 protein or a portion thereof in vertebrates, wherein said nucleic acid sequence comprises a first polynucleotide sequence encoding an immunoglobulin light chain variable region polypeptide, and a second polynucleotide sequence encoding an immunoglobulin heavy chain variable region polypeptide.

21. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the vertebrate is selected from the group consisting of human, non-human primate, murine, bovine, ovine, equine, caprine, leporine, avian, feline and canine.

22. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the vertebrate is human.

23. (Previously Presented) An isolated and purified nucleic acid sequence comprising an analogue of the nucleic acid sequence according to claim 1, wherein said analogue encodes a polypeptide having a biological activity which is functionally the same as the polypeptide (s) encoded by said polynucleotide sequence.

24. (Previously Presented) The nucleic acid sequence according to claim 1, wherein the disease is selected from the group consisting of cancer, rheumatoid arthritis and coronary heart disease.

25. (Previously Presented) The nucleic acid sequence according to claim 24, wherein the disease is cancer.

26. (Previously Presented) The nucleic acid sequence according to claim 25, wherein the cancer is selected from the group consisting of carcinogenic tumors; tumors of epithelial origin, such as colo-rectal cancer, breast cancer, lung cancer, head and neck tumors, hepatic cancer, pancreatic cancer, ovarian cancer, gastric cancer, brain cancer, bladder cancer, prostate cancer and urinary/genital tract cancer, oesophageal cancer; mesenchymal tumors, such as sarcoma; and haemopoietic tumors, such as B cell lymphoma.

27. (Previously Presented) A polypeptide of an antibody, or fragment thereof, having binding affinity to a p53 protein or a portion thereof in vertebrates, wherein said polypeptide is obtained from a vertebrate host expressing an immune response against a naturally-occurring disease.

28. (Previously Presented) The polypeptide according to claim 27, wherein said immune response is characterized by expression of at least one p53 antibody.

29. (Previously Presented) An isolated and purified polypeptide, wherein said polypeptide is encoded by the nucleic acid sequence according to claims 1.

30. (Previously Presented) An isolated and purified polypeptide of an antibody, or fragment thereof, comprising an amino acid sequence selected from the group consisting of SEQ ID Nos 31-60, wherein said antibody, or fragment thereof, has binding affinity to a p53 protein or a portion thereof.

31. (Previously Presented) A polypeptide according to claim 27, wherein said polypeptide is selected from the group consisting of: Fv, $F_{ab}$, $F(ab)_2$, scFv (single chain Fv), dAb (single domain antibody), bi-specific antibodies, diabodies and triabodies.

32. (Previously Presented) The polypeptide according to claim 27, wherein said polypeptide has binding affinity to a p53 protein or a portion thereof.

33. (Previously Presented) The polypeptide according to claim 27, wherein said polypeptide has binding affinity for residues of one or more of the N-terminus, the C-terminus or the central domain of a p53 protein or a portion thereof.

34. (Previously Presented) The polypeptide according to claim 27, wherein said polypeptide has binding affinity for residues of the N-terminus of a p53 protein or a portion thereof.

35. (Previously Presented) The polypeptide according to claim 27, wherein said polypeptide has binding affinity for residues about 10 to about 55 of the N-terminus of a p53 protein or portion thereof.

36. (Previously Presented) The polypeptide according to claim 27, wherein said polypeptide has binding affinity for residues about 10 to about 25 of the N-terminus of a p53 protein or portion thereof.

37. (Previously Presented) The polypeptide according to claim 27, wherein said polypeptide has binding affinity for residues about 40 to about 50 of the N-terminus of a p53 protein or portion thereof.

38. (Previously Presented) The polypeptide according to claim 27, wherein said polypeptide has binding affinity for residues about 27 to about 44 of the N-terminus of a p53 protein or portion thereof.

39. (Previously Presented) The polypeptide according to claim 27, wherein said polypeptide has binding affinity for residues about 40 to about 44 of the N-terminus of a p53 protein or portion thereof.

40. (Previously Presented) The polypeptide according to claim 27, wherein said polypeptide has binding affinity for residues of the central domain of a p53 protein or a portion thereof.

41. (Previously Presented) An isolated and purified polypeptide, wherein said polypeptide is a homologous polypeptide of the polypeptide according to claim 27.

42. (Previously Presented) The polypeptide according to claim 41, wherein said polypeptide is at least 45% homologous to a polypeptide of an antibody or fragment thereof, having binding affinity to a p53 protein or a portion thereof in vertebrates, wherein said polypeptide of an antibody is obtained from a vertebrate host expressing an immune response against a naturally-occurring disease.

43. (Previously Presented) The polypeptide according to claim 41, wherein said polypeptide is at least 75% homologous to the polypeptide of an antibody, or fragment thereof, having binding affinity to a p53 protein or a portion thereof in vertebrates, wherein said polypeptide of an antibody is

obtained from a vertebrate host expressing an immune response against a naturally-occurring disease.

44. (Previously Presented) The polypeptide according to claim 41, wherein said polypeptide is at least 95-99% homologous to the polypeptide of an antibody, or fragment thereof, having binding affinity to a p53 protein or a portion thereof in vertebrates, wherein said polypeptide of an antibody is obtained from a vertebrate host expressing an immune response against a naturally-occurring disease .

45. (Previously Presented) The polypeptide according to claim 27, wherein the disease is selected from the group consisting of cancer, rheumatoid arthritis and coronary heart disease.

46. (Previously Presented) The polypeptide according to claim 45, wherein the disease is cancer.

47. (Previously Presented) The polypeptide according to claim46, wherein the cancer is selected from the group consisting of carcinogenic tumors; tumors of epithelial origin, such as colo-rectal cancer, breast cancer, lung cancer, head and neck tumors, hepatic cancer, pancreatic cancer, ovarian cancer, gastric cancer, brain cancer, bladder cancer, prostate cancer and urinary/genital tract cancer, oesophageal cancer; mesenchymal tumors, such as sarcoma; and haemopoietic tumors, such as B cell lymphoma.

48. (Original) A peptide fragment of the polypeptide of any one of SEQ ID Nos 31-60, wherein said peptide fragment induces an immune response when administered to a vertebrate.

49. (Previously Presented) The peptide fragment according to claim 48, wherein said peptide fragment comprises between about 5 and about 50 contiguous amino acids of any one of SEQ ID Nos 31-60.

50. (Previously Presented) The peptide fragment according to claim 48, wherein said peptide fragment comprises between about 5 and about 30 contiguous amino acids of any one of SEQ ID Nos 31-60.

51. (Previously Presented) The peptide fragment according to claim 48, wherein said peptide fragment comprises between about 8 and about 20 contiguous amino acids of any one of SEQ ID Nos 31-60.

52. (Previously Presented) The peptide fragment according to claim 48, wherein said peptide fragment is derived from the complementarity determining region.

53. (Previously Presented) The peptide fragment according to claim 48, wherein said immune response is an idiotypic response.

54. (Previously Presented) The peptide fragment according to claim 48, wherein the vertebrate is human.

55. (Original) An antibody or fragment thereof, wherein said antibody or fragment thereof has binding affinity to a p53 protein or a portion thereof in vertebrates, and wherein said antibody is obtained from a vertebrate host expressing an immune response against a naturally-occurring disease.

56. (Previously Presented) The antibody or fragment thereof according to claim 55, wherein said immune response is characterized by expression of a p53 antibody.

57. (Previously Presented) The antibody, or fragment thereof, having binding affinity to a p53 protein or a portion thereof in vertebrates, wherein said antibody or fragment thereof is comprised of the polypeptide according to claim 27.

58. (Previously Presented) The antibody, or fragment thereof, having binding affinity to a p53 protein or a portion thereof in vertebrates, wherein said antibody or fragment thereof is encoded by the nucleic acid sequence according to claim 1.

59. (Previously Presented) The antibody fragment according to claim 55, wherein said fragment is an immunologically active fragment.

60. (Previously Presented) The antibody fragment according to claim 55, wherein said fragment comprises at least one complementarity determining region.

61. (Previously Presented) The antibody fragment according to claim 55, wherein said fragment is selected from the group consisting of: Fv, $F_{ab}$, $F(ab)_2$, scFv (single chain Fv), dAb (single domain antibody), bi-specific antibodies, diabodies and triabodies.

62. (Previously Presented) The antibody, or fragment thereof, according to claim 55, which is a polyclonal antibody.

63. (Previously Presented) The antibody, or fragment thereof, according to claim 55, which is a monoclonal antibody.

64. (Previously Presented) The antibody or fragment thereof according to claim 57, wherein said antibody or fragment thereof has binding affinity for residues of one or more of the N-terminus, the C-terminus or the central domain of a p53 protein or a portion thereof.

65. (Previously Presented) The antibody or fragment thereof according to claim 57, wherein said antibody or fragment thereof has binding affinity for residues of the N-terminus of a p53 protein or a portion thereof.

66. (Previously Presented) The antibody or fragment thereof according to claim 57, wherein said antibody or fragment thereof has binding affinity for residues about 10 to about 55 of the N-terminus of a p53 protein or portion thereof.

67. (Previously Presented) The antibody or fragment thereof according to claim 57, wherein said antibody or fragment thereof has binding affinity for residues about 10 to about 25 of the N-terminus of a p53 protein or portion thereof.

68. (Previously Presented) The antibody or fragment thereof according to claim 57, wherein said antibody or fragment thereof has binding affinity for residues about 40 to about 50 of the N-terminus of a p53 protein or portion thereof.

69. (Previously Presented) The antibody or fragment thereof according to claim 57, wherein said antibody or fragment thereof has binding affinity for residues about 27 to about 44 of the N-terminus of a p53 protein or portion thereof.

70. (Previously Presented) The antibody or fragment thereof according to claim 57, wherein said antibody or fragment thereof has binding affinity for residues about 40 to about 44 of the N-terminus of a p53 protein or portion thereof.

71. (Previously Presented) The antibody or fragment thereof according to claim 57, wherein said antibody or fragment thereof has binding affinity for residues of the central domain of a p53 protein or a portion thereof.

72. (Previously Presented) The antibody or fragment thereof according to claim 55, wherein the disease is selected from the group consisting of cancer, rheumatoid arthritis and coronary heart disease.

73. (Previously Presented) The antibody or fragment thereof according to claim 72, wherein the disease is cancer.

74. (Previously Presented) The antibody or fragment thereof according to claim 73, wherein the cancer is selected from the group consisting of carcinogenic tumors; tumors of epithelial origin, such as colo-rectal cancer, breast cancer, lung cancer, head and neck tumors, hepatic cancer, pancreatic cancer, ovarian cancer, gastric cancer, brain cancer, bladder cancer, prostate cancer and urinary/genital tract cancer, oesophageal cancer; mesenchymal tumors, such as sarcoma; and haemopoietic tumors, such as B cell lymphoma.

75. (Previously Presented) A vector comprising the nucleic acid sequence according to claim 1.

76. (Previously Presented) The vector according to claim 75, wherein said vector is selected from the group consisting of viral, plasmid, bacteriophage, phagemid, cosmid, bacterial artificial chromosome, and yeast artificial chromosome.

77. (Previously Presented) The vector according to claim 76, wherein said bacteriophage is selected from the group consisting of λgt1 0 and λgt11 and phage display vectors.

78. (Previously Presented) The vector according to claim 77, wherein said phage display vector is selected from vectors derived from pCOMB vectors.

79. (Previously Presented) The vector according to claim 76, wherein said phage display vector is of the MCO group.

80. (Previously Presented) The vector according to any one of claims 77, wherein said phage display vector is selected from the group consisting of MCO1, MCO3 and MC06 vectors.

81. (Previously Presented) The vector according to claim 77, wherein said phage display vector is MCO3.

82. (Previously Presented) The vector according to claim 75, wherein said vector is a mammalian expression vector.

83. (Previously Presented) The vector according to claim 82, wherein said mammalian expression vector is pG1D102-MCO or pKN100-MCO.

84. (Previously Presented) A host cell transformed with the vector according to claim 75.

85. (Previously Presented) The host cell according to claim 84, wherein said host cell is selected from the group consisting of *E. coli*, *Bacillus*, *Streptomyces*, *Pseudomonas*, *Salmonella*, and *Serratia*.

86. (Previously Presented) The host cell according to claim 84, wherein said host cell is selected from the group consisting of yeast, fungi, plant, insect cells and mammalian cells.

87. (Previously Presented) The host cell according to claim 86, wherein said mammalian cells are selected from the group consisting of CHO cell lines, COS cell lines, HeLa cells, L cells, murine 3T3 cells, c6 glioma cells and myeloma cell lines.

88. (Previously Presented) The host cell according to claim 86, wherein said mammalian cells are CHO DG44 cells.

89. (Previously Presented) A non-human vertebrate comprising a host cell according to claim 84.

90. (Previously Presented) A pharmaceutical composition comprising the polypeptide according to claim 27 together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

91. (Previously Presented) The pharmaceutical composition according to claim 90, wherein said polypeptide is in a form selected from the group consisting of polypeptide/chelate,

polypeptide/drug, polypeptide/prodrug, polypeptide/toxin, polypeptide/imaging marker, antibody/chelate, antibody/drug, antibody/prodrug, antibody/toxin and antibody/imaging marker.

92. (Previously Presented) The pharmaceutical composition according to claim 91, wherein said chelate is selected from the group consisting of: $^{90}Y$, $^{131}I$ and $^{188}Re$.

93. (Previously Presented) The pharmaceutical composition according to claim 91, wherein said drug is a cytotoxic drug.

94. (Previously Presented) The pharmaceutical composition according to claim 93, wherein said cytotoxic drug is selected from the group consisting of adriamycin, melphalan, cisplatin, taxol, fluorouricil, cyclophosphamide.

95. (Previously Presented) The pharmaceutical composition according to claim 91, wherein said prodrug is an antibody directed prodrug therapy or ADEPT.

96. (Previously Presented) The pharmaceutical composition according to claim 91, wherein said toxin is selected from the group consisting of ricin, abrin, *Diptheria* toxin and *Pseudomonas* endotoxin (PE 40).

97. (Previously Presented) The pharmaceutical composition according to claim 91, wherein said imaging marker is selected from the group consisting of $^{125}1$, $^{131}I$, $^{123}I$, $^{111}In$, $^{105}Rh$, $^{153}Sm$ $^{67}Cu$ $^{166}Ho$, $^{177}Lu$, $^{186}Re$, $^{188}Re$, and $^{99m}Tc$.

98. (Previously Presented) The pharmaceutical composition according to claim 91, wherein said imaging marker is gadolinium.

99. (Previously Presented) A vaccine comprising a nucleic acid sequence according to claim 1, or a fragment thereof, together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

100. (Previously Presented) The vaccine according to claim 99, wherein said vaccine is an idiotypic vaccine.

101. (Previously Presented) The vaccine according to claim 99, wherein said vaccine is formulated for administration via an oral, inhalation, topical or parenteral route.

102. (Previously Presented) A method for inducing an immune response against disease in a vertebrate, comprising administering to said vertebrate an immunologically effective amount of the polypeptide,or peptide fragment thereof, according to claim 27.

103. (Previously Presented) The method according to claim 102, wherein the polypeptide, peptide fragment, or antibody, or fragment thereof, is administered together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

104. (Previously Presented) A method for the treatment and/or prophylaxis of disease in a vertebrate in need of said treatment and/or prophylaxis, wherein said method comprises administering to said vertebrate a therapeutically effective amount of the polypeptide, or peptide fragment thereof, according to claim 27.

105. (Previously Presented) The method according to claim 102, wherein the disease is selected from the group consisting of cancer, rheumatoid arthritis and coronary heart disease.

106. (Previously Presented) The method according to claim 102, wherein the disease is cancer.

107. (Previously Presented) The method according to claim106, wherein the cancer is selected from the group consisting of carcinogenic tumors; tumors of epithelial origin, such as colo-rectal cancer, breast cancer, lung cancer, head and neck tumors, hepatic cancer, pancreatic cancer, ovarian cancer, gastric cancer, brain cancer, bladder cancer, prostate cancer and urinary/genital tract cancer, oesophageal cancer; mesenchymal tumors, such as sarcoma; and haemopoietic tumors, such as B cell lymphoma.

108. (Previously Presented) A diagnostic kit for the detection of polypeptides encoded by the p53 gene in vertebrates, said kit comprising the antibody, or fragment thereof, according to claim 55, together with a diagnostically acceptable carrier and/or diluent.

109. (Previously Presented) The diagnostic kit according to claim 108, wherein said kit comprises:

(a) a first container containing the antibody, or fragment thereof, wherein said antibody or fragment thereof has binding affinity to a p53 protein or a portion thereof in vertebrates, and wherein said antibody is obtained from a vertebrate host expressing an immune response against a naturally-occurring disease, and;

(b) a second container containing a conjugate comprising a binding partner of the antibody, or fragment thereof, together with a detectable label.

110. (Previously Presented) A method for screening for a disease in a vertebrate comprising:

(a) contacting a sample from a vertebrate with a nucleic acid probe comprising a nucleic acid sequence according to claim 1, or an oligonucleotide fragment thereof, and

(b) detecting hybridization between the nucleic acid sample and the polynucleotide sequence.

111. (Previously Presented) The method according to claim 110, wherein the oligonucleotide fragment is between about 10 to about 100 nucleotides in length.

112. (Previously Presented) The method according to claim 110, wherein the oligonucleotide fragment is between about 15 to about 30 nucleotides in length.

113. (Previously Presented) The method according to claim 110, wherein hybridization as compared to non-hybridization is indicative of disease.

114. (Previously Presented) The method according to any one of claims 110, wherein said disease is cancer.

115. (Previously Presented) The method according to claim 110, wherein hybridization is conducted under low, moderate, or high stringency.

116. (Previously Presented) The method according to claim 110, wherein hybridization is conducted under high stringency.

117. (Previously Presented) A method for screening for a disease in a vertebrate comprising:

(a) contacting a sample from a vertebrate with the antibody, or fragment thereof, according to claim 55, and

(b) detecting the presence of the antibody, or fragment thereof, bound to a p53 polypeptide.

118. (Previously Presented) The method according to claim 117, wherein said disease is cancer.

119. (Previously Presented) A method of gene therapy, wherein said method comprises:

(a) inserting a nucleic acid sequence according to claim 1 into a host cell;

(b) expressing the nucleic acid sequence in the transformed cell.

120. (Original) The method according to claim 119, wherein said vector is an expression vector.

121. (Previously Presented) A process for preparing an antibody, or fragment thereof, having binding affinity to a p53 protein or a portion thereof in vertebrates, wherein said process comprises:

(a) isolating from a vertebrate a nucleic acid sequence according to claim 1;

(b) cloning said nucleic acid sequence into a vector;

(c) constructing an antibody fragment library; and

(d) screening said library for clones expressing the antibody of interest.

122. (Previously Presented) The process according to claim 121, wherein said antibody, or fragment thereof, has binding affinity to a p53 protein or a portion thereof in vertebrates.

123. (Original) The process according to claim 121, wherein said nucleic acid sequence is obtained from an organ suffering from or a collection point for expression of, the disease.

124. (Original) The process according to claim 123, wherein said organ is a lymph node.

125. (Previously Presented) The process according to claim 121, wherein the vector is a phage display vector.

126. (Original) The process according to claim 125, wherein the vector is selected from the group consisting of MC01, MC03 and MC06.

127. (Previously Presented) The process according to claim 125, wherein the vector is MC01.

128. (Previously Presented) A method of locating a nucleotide sequence encoding a polypeptide of an antibody, or fragment thereof, having binding affinity to a p53 protein or portion thereof in

vertebrates, using the nucleic acid sequence according to claim 1, or an oligonucleotide fragment thereof.

129. (Previously Presented) The method according to claim 128, comprising:

(a) contacting a biological sample with a nucleic acid sequence comprising a polynucleotide sequence encoding a polypeptide of an antibody, or fragment thereof, wherein said antibody, or fragment thereof, has binding affinity to a p53 protein or a portion thereof in vertebrates, and wherein said nucleic acid sequence is obtained from a vertebrate host expressing an immune response against a naturally-occurring disease or an oligonucleotide fragment thereof; and

(b) identifying nucleotide sequences in the biological sample which hybridize to said nucleic acid sequence or oligonucleotide fragment.

130. (Previously Presented) The method according to claim 129, wherein the oligonucleotide fragment is between about 10 to about 100 nucleotides in length.

131. (Previously Presented) The method according to claim 129, wherein the oligonucleotide fragment is between about 15 to about 30 nucleotides in length.

132. (Previously Presented) A pharmaceutical composition comprising a peptide fragment according to claim 48 together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

133. (Previously Presented) A pharmaceutical composition comprising an antibody or fragment thereof according to claim 55 together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

134. (Previously Presented) A vaccine comprising a polypeptide according to claim 27 together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

135. (Previously Presented) The vaccine according to claim 134, wherein said vaccine is an idiotypic vaccine.

136. (Previously Presented) The vaccine according to claim 134, wherein said vaccine is formulated for administration via an oral, inhalation, topical or parenteral route.

137. (Previously Presented) A vaccine comprising a peptide fragment according to claim 48 together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

138. (Previously Presented) The vaccine according to claim 137, wherein said vaccine is an idiotypic vaccine.

139. (Previously Presented) The vaccine according to claim 137, wherein said vaccine is formulated for administration via an oral, inhalation, topical or parenteral route.

140. (Previously Presented) A vaccine comprising an antibody or fragment thereof according to claim 55, together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

141. (Previously Presented) The vaccine according to claim 140, wherein said vaccine is an idiotypic vaccine.

142. (Previously Presented) The vaccine according to claim 140, wherein said vaccine is formulated for administration via an oral, inhalation, topical or parenteral route.

143. (Previously Presented) A method for inducing an immune response against disease in a vertebrate, comprising administering to said vertebrate an immunologically effective amount of the peptide fragment according to claim 48.

144. (Previously Presented) The method according to claim 143, wherein the polypeptide, peptide fragment, or antibody, or fragment thereof, is administered together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

145. (Previously Presented) A method for the treatment and/or prophylaxis of disease in a vertebrate in need of said treatment and/or prophylaxis, wherein said method comprises administering to said vertebrate a therapeutically effective amount of the peptide fragment according to claim 48.

146. (Previously Presented) The method according to claim 143, wherein the disease is selected from the group consisting of cancer, rheumatoid arthritis and coronary heart disease.

147. (Previously Presented) The method according to claim 143, wherein the disease is cancer.

148. (Previously Presented) The method according to claim 147, wherein the cancer is selected from the group consisting of carcinogenic tumors; tumors of epithelial origin, such as colo-rectal cancer, breast cancer, lung cancer, head and neck tumors, hepatic cancer, pancreatic cancer, ovarian cancer, gastric cancer, brain cancer, bladder cancer, prostate cancer and urinary/genital tract cancer, oesophageal cancer; mesenchymal tumors, such as sarcoma; and haemopoietic tumors, such as B cell lymphoma.

149. (Previously Presented) A method for inducing an immune response against disease in a vertebrate, comprising administering to said vertebrate an immunologically effective amount of the antibody, or fragment thereof, according to claim 55.

150. (Previously Presented) The method according to claim 149, wherein the polypeptide, peptide fragment, or antibody, or fragment thereof, is administered together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

151. (Previously Presented) A method for the treatment and/or prophylaxis of disease in a vertebrate in need of said treatment and/or prophylaxis, wherein said method comprises administering to said vertebrate a therapeutically effective amount of the antibody, or fragment thereof, according to claim 55.

152. (Previously Presented) The method according to claim 149, wherein the disease is selected from the group consisting of cancer, rheumatoid arthritis and coronary heart disease.

153. (Previously Presented) The method according to claim 149, wherein the disease is cancer.

154. (Previously Presented) The method according to claim 153, wherein the cancer is selected from the group consisting of carcinogenic tumors; tumors of epithelial origin, such as colo-rectal cancer, breast cancer, lung cancer, head and neck tumors, hepatic cancer, pancreatic cancer, ovarian cancer, gastric cancer, brain cancer, bladder cancer, prostate cancer and urinary/genital tract cancer, oesophageal cancer; mesenchymal tumors, such as sarcoma; and haemopoietic tumors, such as B cell lympohoma.

155. (Previously Presented) A method for inducing an immune response against disease in a vertebrate, comprising administering to said vertebrate an immunologically effective amount of the pharmaceutical composition according to claim 90.

156. (Previously Presented) The method according to claim 155, wherein the polypeptide, peptide fragment, or antibody, or fragment thereof, is administered together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

157. (Previously Presented) A method for the treatment and/or prophylaxis of disease in a vertebrate in need of said treatment and/or prophylaxis, wherein said method comprises administering to said vertebrate a therapeutically effective amount of the pharmaceutical composition according to claim 90.

158. (Previously Presented) The method according to claim 155, wherein the disease is selected from the group consisting of cancer, rheumatoid arthritis and coronary heart disease.

159. (Previously Presented) The method according to claim 155, wherein the disease is cancer.

160. (Previously Presented) The method according to claim 159, wherein the cancer is selected from the group consisting of carcinogenic tumors; tumors of epithelial origin, such as colo-rectal cancer, breast cancer, lung cancer, head and neck tumors, hepatic cancer, pancreatic cancer, ovarian cancer, gastric cancer, brain cancer, bladder cancer, prostate cancer and urinary/genital tract cancer, oesophageal cancer; mesenchymal tumors, such as sarcoma; and haemopoietic tumors, such as B cell lymphoma.

161. (Previously Presented) A method for inducing an immune response against disease in a vertebrate, comprising administering to said vertebrate an immunologically effective amount of the vaccine according to claim 99.

162. (Previously Presented) The method according to claim 161, wherein the polypeptide, peptide fragment, or antibody, or fragment thereof, is administered together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

163. (Previously Presented) A method for the treatment and/or prophylaxis of disease in a vertebrate in need of said treatment and/or prophylaxis, wherein said method comprises administering to said vertebrate a therapeutically effective amount of the pharmaceutical composition according to claim 99.

164. (Previously Presented) The method according to claim 161, wherein the disease is selected from the group consisting of cancer, rheumatoid arthritis and coronary heart disease.

165. (Previously Presented) The method according to claim 161, wherein the disease is cancer.

166. (Previously Presented) The method according to claim 165, wherein the cancer is selected from the group consisting of carcinogenic tumors; tumors of epithelial origin, such as colo-rectal cancer, breast cancer, lung cancer, head and neck tumors, hepatic cancer, pancreatic cancer, ovarian cancer, gastric cancer, brain cancer, bladder cancer, prostate cancer and urinary/genital tract cancer, oesophageal cancer; mesenchymal tumors, such as sarcoma; and haemopoietic tumors, such as B cell lymphoma.

167. (Previously Presented) A method of gene therapy, wherein said method comprises:

(a) inserting a vector according to claim 75 into a host cell;

(b) expressing the nucleic acid sequence in the transformed cell.